

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended). In a cellular network in which a mobile station communicates with base stations through a wireless repeater, a method comprising:

causing an antenna of the wireless repeater to sweep over a coverage area through increments;

at each increment, receiving wireless signals;

determining a signal-to-noise ratio at each increment;

monitoring a load of the base stations; and

based on the load of the base stations the signal-to-noise ratio, the wireless repeater repeating the wireless signals at one of the increments to one of the base stations.

Claims 2-6 (Canceled).

Claim 7 (Currently Amended). A method for dynamically directing a wireless repeater, the method comprising:

receiving wireless signals by directing an antenna to incrementally sweep its coverage area across a given area;

the wireless repeater determining carrier-to-cochannel interference ratios of the received wireless signals; and

based on the carrier-to-cochannel interference ratios, directing the wireless repeater to radiate amplified wireless signals at a given increment in a direction of a given base station.

Claim 8 (Canceled).

Claim 9 (Currently Amended). The method of claim 7, ~~further comprising incrementally~~
wherein receiving the wireless signals by directing an antenna to incrementally sweep its
coverage area across a given area comprises receiving the wireless signals from a plurality of
directional antenna components, where each directional antenna component is operable to
receive wireless signals from a given coverage area.

Claim 10 (Currently Amended). The method of claim 7, further comprising for each of
the received wireless signals, storing in data storage a coverage area identifier corresponding to a
~~coverage area~~ an increment from which the wireless signals were received.

Claim 11 (Original). The method of claim 7, further comprising determining a PN-offset
of each received wireless signal.

Claim 12 (Currently Amended). The method of claim 7, wherein directing the wireless
repeater to radiate amplified wireless signals at a given increment ~~in a direction of a given base~~
~~station~~ comprises directing the wireless repeater to radiate the amplified wireless signals ~~in a~~
~~direction~~ at an increment corresponding to a strongest carrier-to-cochannel interference ratio.

Claim 13 (Canceled).

Claim 14 (Currently Amended). The method of claim 7, further comprising radiating the
amplified signals in a direction of a given sector of ~~the~~ a given base station.

Claim 15 (Original). The method of claim 14, further comprising only repeating signals having a PN-offset of the given sector.

Claim 16 (Original). In a wireless repeater operable to radiate in a number of directions so as to provide a number of coverage areas, a method comprising:

incrementally adjusting the wireless repeater to receive wireless signals within the number of coverage areas;

determining characteristics of the wireless signals; and

based on the characteristics, directing the wireless repeater to radiate amplified wireless signals to one of the number of coverage areas.

Claim 17 (Original). The method of claim 16, wherein incrementally adjusting the wireless repeater comprises directing a phased array antenna to sweep its coverage area over the number of coverage areas.

Claim 18 (Original). The method of claim 16, wherein incrementally adjusting the wireless repeater comprises rotating a directional antenna to sweep its coverage area over the number of coverage areas.

Claim 19 (Original). The method of claim 16, wherein the wireless repeater includes a plurality of antennas each operable to receive wireless signals from a given coverage area, and

wherein incrementally adjusting the wireless repeater comprises selecting antennas from the plurality of antennas to receive the wireless signals.

Claim 20 (Original). The method of claim 16, further comprising for each of the wireless signals, storing in data storage a coverage area identifier corresponding to a coverage area from which the wireless signals were received.

Claim 21 (Original). The method of claim 20, wherein determining characteristics of the wireless signals comprises determining characteristics selected from the group consisting of a PN-offset of each wireless signal and a signal-to-noise ratio for each PN-offset.

Claim 22 (Original). The method of claim 21, wherein directing the wireless repeater comprises directing the wireless repeater to radiate the amplified wireless signals to a given coverage area having a coverage area identifier corresponding to a coverage area having the highest signal-to-noise ratio.

Claim 23 (Currently Amended). A wireless repeater comprising:

a donor antenna that is operable to communicate with a plurality of base stations and to receive wireless signals over a coverage area by incrementally sweeping across the coverage area;

a mobile station modem that receives wireless signals from the donor antenna and identifies characteristics of the wireless signals; and

a processor operable to record in data storage the characteristics of the wireless signals and, based on the characteristics, to direct the donor antenna to radiate amplified wireless signals to a given base station at a given increment.

Claim 24 (Original). The wireless repeater of claim 23, wherein the characteristics are selected from the group consisting of PN-offsets of the wireless signals and signal to noise ratios (E_c/I_o) for each PN offset.

Claim 25 (Canceled).

Claim 26 (Currently Amended). The wireless repeater of claim ~~25~~ 23, wherein at each increment, the donor antenna receives wireless signals and passes the wireless signals to the processor which records in the data storage the increment at which each wireless signal was received.

Claim 27 (Original). The wireless repeater of claim 26, wherein the mobile station modem includes a rake receiver that identifies PN-offsets in the wireless signals.

Claim 28 (Original). The wireless repeater of claim 27, wherein the processor records in the data storage the PN offsets and signal-to-noise ratios of the wireless signals at each increment.

Claim 29 (Original). The wireless repeater of claim 28, wherein the processor instructs the donor antenna to radiate the amplified wireless signals to a base station that corresponds to an increment where the mobile station modem detected a highest signal-to-noise ratio.

Claim 30 (Original). The wireless repeater of claim 23, wherein the donor antenna is an antenna selected from the group consisting of an omni-directional antenna, a directional antenna, and a phased array antenna.

Claim 31 (Original). The wireless repeater of claim 23, wherein the donor antenna is a phased array antenna, and wherein the processor records the phase of the phased array antenna at which each wireless signal is received, and based on the characteristics of the wireless signals, directs the phased array antenna to radiate the amplified wireless signals at a given phase.